

III. REMARKS

Status of the Claims

Claims 1 and 14 are amended, claims 2 and 15 are cancelled, and claims 27-30 are added. Claims 1, 3-14, and 16-30 are presented for further consideration.

Summary of the Office Action

Claims 1-5,10,11, 14-18, 23 and 24 stand rejected under 35USC102(e) on the basis of the cited reference Verdonk, U.S. Patent No.6,330,454. Claims 6-9, and 19-22, stand rejected under 35USC103(a) based on the reference Verdonk in view of the cited reference Willars, et al, U.S. Patent No. 6,285,667. Claims 12, 13, 25, and 26 stand rejected under 35USC103(a) based on the reference Verdonk. The Examiner is respectfully requested to reconsider his rejection in view of the above amendments and the following remarks.

Applicant has amended the claims to overcome the rejection based on 35USC112.

Discussion of the Cited Reference

The Examiner continues to rely primarily on the cited reference Verdonk to support the rejection based on anticipation and as the primary reference to support the rejection based on obviousness. The Examiner has repeated the prior rejections without responding to Applicant's arguments.

Verdonk discloses a wireless communication system 100 that is connected to a packet data network 112. The mobile switching centers (MSC) 102 and 116 require an Interworking function to interface with the packet data network 112. A mobile unit may be

located by paging it with standard paging techniques (column 8 lines 26-28). The serving MSC identifies the cell/sector in which the mobile unit operates and converts that information to an approximation of the longitude and latitude. This approximation is based on center of the cell or sector identified (see column 6, lines 20-40) and other factors, such as a main travel route through the cell (column 8, lines 41-65). The serving MSC then returns this location information (longitude and latitude estimate) along with a time stamp via the HLR or directly to the SCP (see column 6, line 65-column 7, line 6). It should be noted that this date stamp gives no information from which location can be determined, it merely identifies the time that a particular location determination was made.

Because of the basis on which the location estimate is made in the reference Verdonk, the location reference obtained is not very reliable. As shown in Figures 6A and 6B, the location is assumed to be in the center area of a cell/sector, or on a midway point on a highway within the cell, or in a significant structure such as a mall within the cell. This is a rather arbitrary basis and may have little relationship to the actual location of the subscriber terminal that is the subject of the location inquiry.

According to independent claims 1 and 14 of this application, as amended, information is provided, from which an estimate of the subscriber terminal location that is more accurate than taught by Verdon, may be obtained. This information includes complete location estimate, cellular interface signal strength measurements, timing information of the radio connection relating to location, and measurements based on sources unrelated to a radio connection.

Verdonk does not disclose that the paging response message includes any information other than cell location that is useful in location determination. In Verdonk, MSC returns location information as longitude and latitude, estimated on the basis of the cell/sector information, supplemented by assumptions relating to physical characteristics of a particular cell. It is to be noted that such location is not a very accurate one, as cell/sector may be a comparatively large area. In the present invention, the paging response message includes, besides identity of the serving cell also other information useful in location determination.

With respect to the Examiner's reference to timing information, the system of the reference Verdonk does not utilize "timing information of radio connection relating to location", because, in Verdonk, only a time stamp indicating what time the location was last determined is provided. According to the present application, paragraph [0060], timing information includes a timing advance factor or the round trip time. New claims 27 and 29 are now directed to this subject matter.

The system of Verdonk is, therefore, missing several features of the subject application according to independent claim 1 and 14, as amended. Accordingly, the reference Verdonk does not support the rejection based on anticipation.

The Examiner is reminded that the anticipation analysis requires a positive answer to the question of whether the system of Verdonk would infringe the claims of this application if it were later.

Claim 1 of this application includes the following feature:

"locating the subscriber terminal on the basis of the information included in the paging response message, wherein said information comprises identity of a serving cell and other information comprising at least one of complete location estimate, cellular interface signal strength measurements, timing information of the radio connection relating to location, and measurements based on sources unrelated to a radio connection."

Since this is not present in the system of the reference Verdonk, there can be no infringement of the subject claims. Equivalent language appears in independent claim 14. Therefore the teaching of Verdonk does not support the rejection based on anticipation with respect to any of the claims.

The Issue of Obviousness

As previously submitted, the disclosure of the cited reference Verdonk is deficient beyond what the Examiner has indicated and these deficiencies are not remedied by the proposed combination with the teaching of the reference Willars. The Examiner has cited the combined teachings of Verdonk and Willars with respect to claim 6-8, and 19-21. The system of Willars is described in column 2, lines 11-15 as follows:

"In the preferred embodiment of the present invention, the simultaneous call connection is accomplished using a unique page procedure between the core networks, generic radio access network, and mobile station to which the simultaneous calls are destined."

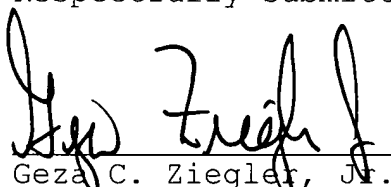
This unique page procedure allows a mobile station to receive simultaneous messages from two different core networks, while employing only a single channel between the generic radio access network and the mobile station. There is no mention of a locating service that is initiated by a page from a mobile unit. The Examiner indicates that this reference, in combination with the reference Verdonk, teaches the initiation of a location request by a mobile terminal. This is speculation by the

Examiner, as there is nothing in these references to support the Examiner's position. Applicant submits that the modification of the teachings of Verdonk and Willars, in order to obtain the invention, as described in the amended claims submitted herein, would not have been obvious to one skilled in the art.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A check in the amount of \$320.00 is enclosed for a one-month extension of time as well as the additional claims fee. The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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5 April 2002
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